high silicon cast iron anodes
solid rod & canister

Datasheet DS 001
Rev.00

High Silicon cast Iron (HSCI) anodes are amongst the most widely used anodes for impressed current cathodic protection systems since the 1950's. Due to their high content of silicon (14-16%) the surface of these anodes is readily and continually oxidized with a thin film of hydrated silicon oxides, which gives their extraordinary corrosion resistance and low consumption rate.

HSCI anodes have been used with great results in a variety of environments like ground, vertical deepwell, fresh and salt water, where they have proven their exceptional reliability. HSCI have also a good resistance in low-pH environment.

Our HSCI anodes are manufactured according ASTM A518 M (grade 3) and BS 1591 Standards, either with or without Chrome addition. Chrome enhance alloy performance in terms of corrosion resistance especially in alkali and hi-chloride environment, and is generally accepted as standard.

HSCI anodes are produced both in solid rod and hollow tubular form. Their shape and dimensions can be customized according client's requirements. Anodes are delivered with standard 3 m 1x16 mm2 double insulation XLPE/PVC cable, connected via stud and cable lug. Other cable's lengths, size, type (including HEPR/PVC & HMWPE/Halar), and connections systems are available on customer's request.

Chemical Composition:

Standard	**ASTM A518M Gr.3**		**BS 1591**	
Elements	**Minimum %**	**Maximum %**	**Minimum %**	**Maximum %**
Silicon	14.20	14.75	14.25	15.25
Chromium	3.25	5.00	4.00	5.00
Carbon	0.70	1.10		1.40
Manganese		1.50		1.00
Molybdenum		0.20		-
Copper		0.50		-
Phosphorus	-	-		0.25
Sulphur	-	-		0.10
Iron	Remainder at 100%		Remainder at 100%	

TECNOSEAL INDUSTRY S.R.L.
cathodic protection & corrosion services

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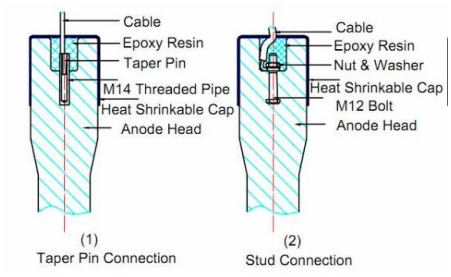

Rod & Canister anodes characteristics:

For clay soils where current density must be kept low to avoid the risk of electro-osmotic drying, or where it is necessary to maintain a low anodic resistance, HSCI anodes are available pre-packaged in galvanized steel drum filled with low-resistivity coke breeze (canister anodes).

Consumption rate (kg/A*y)		Utilization factor (%)	
min.	typ.	min.	typ.
0.1	0.45	65	85

Our Standard types: bare anodes

	Diameter		Length		Nominal Weight	Nominal current*
Code	mm	In.	mm	In.	kg	A
AI.FS.008	38	1.5	1525	60	13	1.25
AI.FS.012	51	2	1220	48	17	1.6
AI.FS.013	51	2	1525	60	21	2
AI.FS.014	76	3	1525	60	50	4.8

*Nominal current calculated for a minimum 15y lifetime with 0.45 kg/A*y consumption rate and 65% utilization factor

Our Standard types: Canister

	Anode diameter		Anode length		Canister length	Canister diameter	Nominal current**
Code	mm	In.	mm	In.	mm	mm	A
AI.CN.001	38	1.5	1525	60	2000	200	3
AI.CN.002	38	1.5	1525	60	2000	230	3
AI.CN.003	51	2	1525	60	2000	200	4.8
AI.CN.004	51	2	1525	60	2000	230	4.8

**Nominal current calculated for a minimum 15y lifetime with 0.25 kg/A*y consumption rate and 85% utilization factor

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